

GALILEO GALILEI

1564–1642



WHY HE MADE HISTORY Galileo Galilei was one of the greatest scientists in history. His discoveries transformed science and paved the way for the Scientific Revolution.



As you read the biography below, think about how Galileo's inventiveness led him to make important discoveries.

Galileo was born in Pisa, Italy, in 1564. He went to the University of Pisa to study medicine, but once there he decided to study mathematics instead. As a student he designed a new kind of balance for weighing small masses and became known in scientific circles.

Although he did not finish his degree, Galileo taught mathematics at the University of Pisa for three years. During that time he made his famous experiments that disproved the existing theory that objects of different weights fall at different speeds. He also created the experimental method of scientific study. For the next 18 years, Galileo taught at the University of Padua, where he continued his experiments.

In 1609 Galileo found out about the telescope that had been invented by the Dutch. He made improvements to it and began producing the most powerful telescopes of the day. He was given **tenure** at the university and his salary was doubled. Galileo began to use his improved telescope to study the sky. He made important discoveries about the moon and the planets that earned him even more recognition. He was given a position by the grand duke of Tuscany as mathematician and philosopher.



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VOCABULARY

tenure teaching status
protected from dismissal

astronomical related to the
study of objects in the sky

heretical an opinion
against established
religious beliefs

As a result of his **astronomical** studies, Galileo came to agree with the Copernican theory that the sun is the center of the solar system and that the earth is merely one of its planets. Galileo's acceptance of this theory pushed forward the Scientific Revolution but got him into trouble with the church.

The Roman Catholic Church at the time taught that, according to the Bible, the earth was the center of the universe. The Copernican theory was considered **heretical**. The church ordered Galileo not to "hold or defend" the theory. In spite of this censure Galileo wrote the book *Dialogue Concerning the Two Chief World Systems: Ptolemaic & Copernican*, in which he favors the Copernican theory. In 1616 the Inquisition tried and condemned Galileo of heresy and placed him under house arrest for the rest of his life.

Although under house arrest, Galileo basically lived in comfort and continued his scientific investigations. He managed to have his work smuggled out of Italy and published. Even after he became blind, he continued his work with the help of a young student until his death in 1642.

WHAT DID YOU LEARN?

- 1. Recall** What controversial theory did Galileo support?

- 2. Make an inference** Why do you think the Copernican theory was considered to be heresy by the church?

ACTIVITY

- 3.** Imagine that you are designing a postage stamp to honor Galileo. Design and draw a stamp that you think is representative of Galileo and his accomplishments. Write a brief description of his main achievements.